Attorney Docket: 2260/119

Process for Obtaining HMG-CoA Reductase Inhibitors of High Purity

Abstract

Lovastatin, pravastatin, simvastatin, mevastatin, atorvastatin, and derivatives and analogs thereof are known as HMG-CoA reductase inhibitors and are used as antihypercholesterolemic agents. The majority of them are produced by fermentation using microorganisms of different species identified as species belonging to *Aspergillus*, *Monascus*, *Nocardia*, *Amycolatopsis*, *Mucor* or *Penicillium* genus, *Streptomyces*, *Actinomadura*, *Micromonospora*, some are obtained by treating the fermentation products using the method of chemical synthesis or they are the products of total chemical synthesis. The purity of the active ingredient is an important factor for manufacturing the safe and effective pharmaceutical, especially if the pharmaceutical product must be taken on a longer term basis in the treatment or prevention of high plasma cholesterol. The accumulation of the impurities from the pharmaceuticals of lower purity may cause many side effects during the medical treatment. The present invention relates to a new industrial process for the isolation of HMG-CoA reductase inhibitors using so-called displacement chromatography. Use of the invention enables one to obtain HMG-CoA reductase inhibitors of high purity, with high yields, lower production costs and suitable ecological balance.